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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/490,979

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Timothy J. Wilsom

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05/26/2004

MOTOROLA, INC.

1303 EAST ALGONQUIN ROAD

IL01/3RD

SCHAUMBURG, IL 60196

EXAMINER

HA, DAC V

ART UNIT

PAPER NUMBER

2634

8

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/490,979

Applicant(s)

WILSON, TIMOTHY J.

Examiner

Dac V. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-4, 13-17** are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi et al. (US 6,404,778) (hereinafter as Hayashi).

Regarding claim 1, Hayashi teaches the claimed subject matter as followed.

“transmitting a downlink signal burst from the base transceiver station to the mobile unit, the downlink signal burst containing a selected number of bits having a first time length” (Figures 3, 5, 7, elements 320, 1420, 2320, respectively; Col. 6, lines 3-5, 9; Col. 8, line 67 to Col. 9, line 1; Col. 12, lines 66-67);

“transmitting an uplink signal burst from the mobile unit to the base transceiver station, the uplink signal burst containing the selected number of bits having a second time length” (Figures 3, 5, 7, elements 310, 1410, 2310, respectively; Col. 6, lines 3-5, 7, 14-15; Col. 8, lines 64-65; Col. 9, line 8; Col. 12, lines 64-65; Col. 13, lines 2-4);

“wherein the first time length is shorter than the second time length thereby providing a guard time” (Col. 6, line 27; Col. 9, line 22; Col. 13, line 29).

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Regarding claim 13, see claim 1 above.

Regarding claim 2, Hayashi further implies the teaching of the claimed subject matter "wherein the guard time is sufficient for the mobile unit to switch from transmit to receive mode" in Col. 2, lines 1-3; Col. 6, lines 27-29.

Regarding claim 14, see claim 2 above.

Regarding claim 3, Hayashi further teaches the claimed subject matter:

"forming the downlink signal burst using a first modulation technique" (Col. 13, lines 5-18), wherein the "first modulation technique" is, i.e., QPSK;

"forming the uplink signal burst using a second modulation technique" (Col. 13, lines 5-18), wherein the "second modulation technique" is, i.e., BPSK.

Regarding claims 15, 16, see claim 3 above.

Regarding claim 4, Hayashi further teaches the claimed subject matter "wherein the first modulation technique has a higher-order than the second modulation technique" in Col. 13, lines 5-18.

Regarding claim 17, see claim 4 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. **Claims 5-12, 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi.

Regarding claims 5-10, these claimed subject matter would have been obvious to a person of ordinary skill in the art as optional. That is, Hayashi only shows two types of modulation techniques, as an example, a person of ordinary skill in the art would have realized that any other suitable modulation technique could also be used as desired.

Regarding claims 11-12, these claimed subject matter would have been obvious to a person of ordinary skill in the art as optional. That is, Hayashi does not limit the burst length and the guard time to any particular length, therefore, a person of skilled in the art would have realized that the specific length of the burst and the guard time would have been design specific.

Regarding claims 18-20, see reasoning in claims 5-12 above.

Response to Arguments

5. Applicant's arguments filed 03/10/04 have been fully considered but they are not persuasive.

In the REMARKS, page 7, 8 of the amendment filed on 03/10/04, applicant has argued "Hayashi specifically refers to guard time bits as being contained within the communication control bits. However, the communication control bits include bits in addition to the guard time bits. Thus, it is unclear how many bits make up the guard time bits of Hayashi." And "... the applicants do not see how Hayashi teaches or suggests

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that the guard time bits both have the same length in the forward and reverse burst and have a shorter transmission time length in the downlink burst versus the uplink burst.

The applicants specially request the Examiner to explain with particularity how he believes Hayashi presumably does teach or suggest this, since the applicants do not see how Hayashi does."

Hayashi discloses a method of burst transmission in which the burst lengths of forward link and reverse link are adjustable. The forward link burst contains a number of user information bits, I_f . The reverse link burst contains the same number of user information bits, I_r , (Figures 3, 5, 7; Col. 6, lines 15-16; Col. 7, lines 21-26). In addition to the user information bits, both the forward link and reverse link burst include communication control bits, C_f , C_r , respectively. In a particular embodiment, the number of control bits in the reverse link burst is longer than that of the forward link burst, $C_r > C_f$ (Figures 3, 5, 7; Col. 6, lines 12-13; Col. 7, lines 16-17). The sum of the user information bits and control information bits makes up the burst length of the forward link and the reverse link (Figure 3). Therefore, the forward link burst contains "a selected number of bits", the user information bits, and has a "first time length", and the reverse link burst contains "the selected number of bits", the user information bits, and has a "second time length", wherein "the first time length is shorter than the second time length" (inherently since $C_r > C_f$). Moreover, the control information bits disclosed by Hayashi also contains "guard time" bits (Col. 6, lines 24-25), thereby also provides "guard time". Further, since independent claims 1 and 13 recite nothing about how many bits make up the guard

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time, it is clear that the guard time provided Hayashi is sufficient to read on the claimed subject matter "thereby providing a guard time" in independent claims 1, and 13.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-5500.

Dac V. Ha
Examiner
Art Unit 2634


CHIEH M. FAN
PRIMARY EXAMINER